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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SALL, EL HADJI MALICK	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,097	HAINES, ROBERT E.	
	Examiner	Art Unit	
	El Hadji M. Sall	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-18 and 20* is/are pending in the application.

4a) Of the above claim(s) *15-18 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the correspondence filed on May 31, 2006. Claims 1, 4, 6 and 13 are amended. Claims 5 and 15-20 are cancelled. Claims 1, 4, 6 and 13 are pending. Claims 1, 4, 6 and 13represent dynamic mapping of wireless network devices.

2. Claim Rejections - 35 USC § 112

Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "relative proximity" in claim 1, line 7 is a relative term, which renders the claim indefinite. The term "relative proximity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Appropriate correction is required.

3. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4 and 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogier et al. U.S. 6,845,091 in view of Sandhu et al. U.S. 6,867,733.

Ogier teaches the invention substantially as claimed including mobile ad hoc extensions for the Internet.

As to claim 1, Ogier teaches a dynamic map of a wireless network, comprising:

representations of a plurality of network devices depicting locations of the network devices relative to a reference point, wherein the locations of the representations are adapted for updating in responses to changes in mapping information contained on a computer-usable medium of one of the network devices without the need for manual intervention (column 7, lines 17-22, Ogier discloses each mobile node 18 may move from one location to another location within the same subnet 10 or to another subnet 20 (i.e. subnet 10 or 20 can be equated as to

"reference point", where locations of "network device" or mobile node 18 are depicted relative to "reference point" 10); see abstract);

a representation of a first network device of the plurality of network devices that is requesting a service on the wireless network (column 1-2, lines 65-67 to 1-4, Ogier discloses...Using TCP/IP, the Web browser sends HTTP (Hypertext Transport Protocol) requests to the Web server...; column 43, lines 49-52, Ogier discloses Under some circumstances, numerous clients 12 (e.g., 200), may arrive within range of the subnet 10 simultaneously, each attempting to establish a connection with the server 40); and

a representation of a second network device of the plurality of network devices that is capable of providing the requested service (column 5, lines 52-57, Ogier discloses although represented as a single server 40, other embodiments can have a group of interconnected servers. The data on the server 40 are replicated on one or more of these interconnected servers to provide redundancy in the event that a connection to the server 40 cannot be established);

wherein the representation of the first network device is highlighted to differentiate it from representations of other network devices (column 5-6, lines 58-67 to 1-7, Ogier discloses...Examples of devices that can participate as a node 18 in the subnet 10 include laptop computers, desktop computers, wireless telephones, and personal digital assistants (Pads), network computers, television sets with a service such as Web TV, client computer systems, server computer systems...); and

wherein the representation of the second network device is highlighted to differentiate it from representations of other network devices that are incapable of providing the requested service (column 1, lines 65-67, Ogier discloses After establishing an Internet connection, the client user launches the Web browser to communicate with a Web server on the Internet).

Ogier fails to teach explicitly wherein the representations comprise visual, audible and/or tactile indicators; and wherein the representations provide an indication of at least a relative proximity between their respective network device and the reference point.

However, Sandhu teaches method and system for a plurality of mobile units to locate one another. Sandhu teaches the representations comprise visual, audible and/or tactile indicators (column 1, lines 57-58, Sandhu discloses The area map indicates by a position marker the position of each mobile unit); and

wherein the representations provide an indication of at least a relative proximity between their respective network device and the reference point (column 2, lines 61-66, Sandhu discloses a location stamp indicating the location of the sender mobile unit. The outbound package may contain a request, either in addition to or instead of an announcement. A request may be a request for the location of another user, or a request to be notified if a geographical parameter is met; see abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ogier in view of Sandhu to provide the representations comprise visual, audible and/or tactile indicators; and wherein the representations provide an

indication of at least a relative proximity between their respective network device and the reference point. One would be motivated to do so to allow notification to the requester (abstract).

As to claim 2, Ogier teaches the dynamic map of claim 1, wherein at least one of the network devices or the reference point is a transient device of the wireless network (column 2, lines 51-54, Ogier discloses special routers that implement both the IPv4 and IPv6 protocols in a "dual-stack" configuration are required to support the coexistence and transition phase).

As to claim 3, Ogier teaches the dynamic map of claim 1, further comprising representations of logical connectivity of the plurality of network devices (figure 1).

As to claim 4, Ogier teaches the dynamic map of claim 1, wherein the representations of the plurality of network devices comprise an ordered list of a set of the network devices capable of providing a service requested by another network device of the wireless network, and wherein the order of the list is indicative of a proximity of each of the plurality of network devices to the network device requesting the service (column 10, lines 23-48, Ogier discloses... A list of children nodes of node i, denoted children l(u). c. The sequence number of the most recent link-state update originating from node u received by node i, denoted snip(u)...).

As to claim 6, Ogier teaches the dynamic map of claim 5, further comprising:

a representation of at least one third network device of the plurality of network devices that is capable of providing the requested service (column 1, lines 50-55, Ogier discloses Communications on the Internet is packet-switched; that is, the information that is to pass from one communications entity to another is broken into packets that are individually passed from router to router until the packets arrive at their destination).

wherein the representation of the at least one third network device is highlighted to differentiate it from representations of other network devices that are incapable of providing the requested service (column 2, lines 30-39, Ogier discloses... every router forwards every update to all neighboring routers, even if only a small subset of the neighboring routers need to receive it);

As to claim 7, Ogier teaches the dynamic map of claim 6, wherein the second network device is a device most closely matching a selection criteria to provide the requested service and wherein the highlighting of the representation of the second network device further differentiates it from a representation of each third network device (column 32, lines 1-3, Ogier discloses any route taken by packets sent by the IP host A 12 to the sever 40 on the Internet 30 necessarily traverses Ipv4 infrastructure to reach the gateway 16).

As to claim 8, Ogier teaches the dynamic map of claim 5, further comprising:

a representation of a path between the first network device and the second network device (figure 4).

As to claim 9, Ogier teaches the dynamic map of claim 8, wherein the representation of the path between the first network device and the second network device accounts for obstructions between the first network device and the second network device (abstract, Ogier discloses...a queuing mechanism that can update information upon resuming interrupted communications between nodes...).

As to claim 10, Ogier teaches the dynamic map of claim 8, further comprising: a representation of a path between the first network device and each of the third network devices (column7, lines 54-57, Ogier discloses Each router 14 in the subnet 10 is responsible for detecting, updating, and reporting changes in cost and up-or-down status of each outgoing communication link to neighbor nodes).

As to claim 11, Ogier teaches the dynamic map of claim 10, wherein the representation of the path between the first network device and each of the third second network devices accounts for obstructions between the first network device and the third network devices (abstract, Ogier discloses...a queuing mechanism that can update information upon resuming interrupted communications between nodes...).

As to claim 12, Ogier teaches the dynamic map of claim 1, further comprising a directional indicator indicative of a direction between a first network device requesting a service on the wireless network and a second network device selected to provide the requested service (column 6, lines 61-67, Ogier discloses Each broadcast link connecting multiple nodes 18 is mapped into multiple point-to-point bi-bidirectional link...).

As to claim 13, Ogier teaches the dynamic map of claim 1, further comprising a distance indicator indicative of a distance between a first network device requesting a service on the wireless network and a second network device selected to provide the requested service (column 13, lines 58-62, Ogier discloses his sequence number indicates the "position" up to which node i has received updates from the old parent, and indicates to the new parent that it should send only those updates that occurred subsequently (i.e., after that sequence number)).

As to claim 14, Ogier teaches the dynamic map of claim 13, wherein the distance indicator accounts for obstructions in a path between the first network device and the second network device (abstract, Ogier discloses...a queuing mechanism that can update information upon resuming interrupted communications between nodes...).

5. Response to Arguments

Applicant's arguments filed 05/31/06 have been fully considered but they are not persuasive.

(A) As to claim 1, Applicant traverses the rejection of term "relative proximity" as being a relative term, which renders the claim indefinite.

In regards to point (A), examiner respectfully disagrees.

Examiner maintains the rejection since such term was defined neither in the claim nor in the specification. Applicant fails to point out to Examiner why he is traversing the rejection. Examiner still believe the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

(B) Applicant argues that at least the following limitations are neither taught nor suggested by the cited references: "representations of a plurality of network devices depicting locations of the network devices relative to a reference point, wherein the locations of the representations are adapted for updating in responses to changes in mapping information contained on a computer-usable medium of one of the network devices without the need for manual intervention; a representation of a first network device of the plurality of network devices that is requesting a service on the wireless network; and a representation of a second network device of the plurality of network

devices that is capable of providing the requested service; wherein the representation of the first network device is highlighted to differentiate it from representations of other network devices; and wherein the representation of the second network device is highlighted to differentiate it from representations of other network devices that are incapable of providing the requested service".

In regards to point (B), examiner respectfully disagrees.

Column 7, lines 17-22, Ogier discloses each mobile node 18 may move from one location to another location within the same subnet 10 or to another subnet 20 (i.e. subnet 10 or 20 can be equated as to "reference point", where locations of "network device" or mobile node 18 are depicted relative to "reference point" 10); see abstract.

Column 1-2, lines 65-67 to 1-4, Ogier discloses...Using TCP/IP, the Web browser sends HTTP (Hypertext Transport Protocol) requests to the Web server;

Column 43, lines 49-52, Ogier discloses under some circumstances, numerous clients 12 (e.g., 200), may arrive within range of the subnet 10 simultaneously, each attempting to establish a connection with the server 40.

Column 5, lines 52-57, Ogier discloses although represented as a single server 40, other embodiments can have a group of interconnected servers. The data on the server 40 are replicated on one or more of these interconnected servers to provide redundancy in the event that a connection to the server 40 cannot be established.

Column 5-6, lines 58-67 to 1-7, Ogier discloses...Examples of devices that can participate as a node 18 in the subnet 10 include laptop computers, desktop computers, wireless telephones, and personal digital assistants (Pads), network computers,

television sets with a service such as Web TV, client computer systems, server computer systems...

Column 1, lines 65-67, Ogier discloses after establishing an Internet connection, the client user launches the Web browser to communicate with a Web server on the Internet.

(C) As to claim 1, Applicant argues that there in no discussion of how these devices might be represented in a dynamic map let alone how such representations might be highlighted to provide an indication of which device is requesting a service from the network.

In regards to point (C), examiner respectfully disagrees.

Column 6, lines 8-27, Ogier discloses the subnet 10 can be associated with one organization or administrative domain, such as an Internet service provider (ISP), which associates each node 18 with an assigned IPv6 or IPv4 network address (i.e. this is an "indication of which device (i.e. node 8) is requesting a service from the network")...dynamic topology changes (i.e. dynamic mapping) may result in nodes 18 leaving their home subnet 10 to join a "foreign" subnet (e.g., subnet 20) and new nodes joining the home subnet 10.

(D) As to claim 1, Applicant neither Ogier nor Sandhu address how to represent a first network device requesting a service and a second network device capable of providing the service to differentiate them from other network devices.

In regards to point (D), examiner respectfully disagrees.

Column 5-6, lines 58-67 to 1-7, Ogier discloses examples of devices that can participate as a node 18 in the subnet 10 include laptop computers, desktop computers, wireless telephones, and personal digital assistants (PDAs), network computers, television sets with a service such as Web TV, client computer systems (i.e. any of the above devices such as the PDAs or the wireless telephones can be " the first network device" since they all request service from the provider or the server), server computer systems (i.e. "device capable of providing the service" or "second network device", and this is what differentiate the server to the other nodes such as PDA or wireless telephone). The gateway 16 is a particular type of routing node 14 that connects the subnet 10 to the Internet 30. The subnet 20 is similarly configured with nodes 18' (i.e., hosts 12', routers 14',and gateways 16').

6. Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 571-272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
Patent Examiner
Art Unit: 2157

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